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The Catch in Trading Fishing Access for Foreign Aid

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The Catch in Trading Fishing Access for Foreign Aid

Abstract

The Pacific island countries depend heavily on bilateral aid. Much of this aid is provided by distant water fishing nations in exchange for cheap access to the Western and Central Pacific tuna fishery. Japan access fees (approximately US\$8 million) are comparable to about 5 percent of Japanese aid to the region (approximately US\$150 million). If access fees were maximized, there is potential for the access fees to match, possibly double, total Japanese aid to the region. It is argued that aid dependency is decreasing the transparency of fishing treaties, decreasing the flexibility of government spending, exposing the Pacific island countries to large financial risks associated with possible aid withdrawal, and stifling the region's own efforts for fisheries and broader economic development.

Key words: fisheries, foreign aid, tuna

Introduction

The Western and Central Pacific Ocean is home to the world's largest and most valuable tuna fishery. The tuna migrate through the exclusive economic zones of 22 states and territories (waters of national jurisdiction within 200 miles of a nation's coastline, as delineated in the United Nations Convention on the Law of the Sea), and beyond into vast expanses of international waters (see Figure 1). Tuna is the only significant natural resource of many of the Pacific island countries, and so governance of the resource is a very important, and often highly politicised, issue. Revenue from the fishery constitutes significant proportions of government revenue, export earnings and Gross Domestic Product (GDP) of the Pacific island countries, as shown in Table 1.

Table 1: Economic statistics showing the importance of the tuna industry for selected Pacific Island countries

	Government revenue (percent)	Exports (percent of total value)	GDP (percent)
Cook Is.	...	41 (1999)	...
Fiji	...	7 (1997)	1 (1998)
FSM	29 (1998)	92 (1997)	16 (1990)
Kiribati	61 (1998)	53 (1993)	10 (1993)
Marshall Is.	25 (1993)	94 (1997)	...
New Caledonia	...	27 (1996)	...
Palau	5 (1993)	-	...
Papua New Guinea	2 (1999)	1 (1999)	...
Samoa	...	-	6 (1999)
Solomon Is.	≈ 5 (1993)	20 (1993)	9 (1993)
Tonga	...	18 (1998)	...
Tuvalu	≈ 35 (1993)	-	5 (1993)
Vanuatu	-	<1 (1993)	...

Notes: ... = not available
 - = negligible or zero
 ≈ = approximately
 < = less than

Source: Petersen (2002b)

[Figure 1.]

Despite the richness of the tuna resource, the Pacific island countries have found it tremendously difficult to capture what would appear to be the appropriate level of economic rent from the fishery (Petersen 2002a). A review of fisheries literature in Section 2 indicates that fees paid to access the Western and Central Pacific tuna fishery appear to be well below the true resource rents. There are a number of possible reasons for this; three are presented in Petersen (2002a). First, the pressing need for job creation and foreign exchange has led to the exchange of cheap (or free) access for domestically-based activities. Second, while government should invest economic benefits from the fishery productively, they are often dissipated through wasteful consumption expenditure and poor quality investments. Third, the Pacific island countries depend heavily on bilateral aid provided by distant water fishing nations in exchange for cheap access.

Fisheries ministers gain much public support when announcing aid packages (i.e., the funding of infrastructure or hospitals) that have been negotiated as part of the access agreements. Moreover, much of this aid has been used in direct support of the domestic fishing industry, in almost all cases with poor results. In 1986, the United States government signed the “Compact of Free Association” with the Federated States of Micronesia and the Marshall Islands (both former US colonies). Under the agreement, these countries received US\$6 billion in US aid over a 15-year period, most of which was received in the first five years of the agreements. Schurman (1998) notes that this aid facilitated overly large investments in the tuna industry. Anxious to establish a tuna industry, the Federated States of Micronesia used aid money to buy purse seiners from an Australian businessman at three times their value, with Yap state buying five purse seine boats before it had time to acquire experience in the sector. These are sizeable investments; the market value of a new purse seine boat is US\$12-15 million, and a used one, US\$6-9 million. All these investments have made significant financial losses. Tuvalu, Kiribati and Solomon Islands are other Pacific island governments that have been investing aid money into purse-seine vessels with poor results. Another example of the poor use of foreign aid is the building of a transshipment port in Majuro, Marshall Islands, which was donated by Japan but was empty for close to a decade due to the lack of domestic or foreign boats to service (Schurman 1998).

The purpose of this paper is to provide evidence that the quantity of foreign aid received in exchange for cheap access to the Western and Central Pacific tuna fishery is not so large as to warrant the aid dependency that has developed. Furthermore, this aid dependency decreases the transparency of fishing treaties, decreases flexibility in government spending, exposes the Pacific island countries to large financial risks associated with the possibility of aid withdrawal, and is stifling the region’s own efforts in fisheries development, and indeed broader economic development. The structure of the paper is as follows. Section 2 provides a comparison between access fees and foreign aid received by the Pacific island countries. Japan is the focus of the comparison. Currently, Japanese access fees are equivalent to about six percent of total Japanese aid to the region. However, if access fees were maximized (rather than traded cheaply for foreign aid or domestically-based activity), there is potential for access fees to at least equal, possibly double, the total amount of aid received. A brief discussion of the role of aid in fisheries development in the Pacific is presented in Section 3.

Comparing foreign aid with tuna fishery access fees

Of the distant water fishing nations active in the Western and Central Pacific tuna fishery, only Japan and the United States donate significant amounts of foreign aid to the region (Table 2). Large block donations of foreign aid to the region reflect political ties. The United States provides generous financial support to the former colonies of Federated States of Micronesia, Marshall Islands and Palau through the Compact of Free Association. Australia donates large amounts of aid to Papua New Guinea, a former Australian territory. France is a generous benefactor to its overseas territories,

French Polynesia, New Caledonia, and Wallis and Futuna. Japan provides similar amounts of foreign aid to the region as the United States, although this aid is spread over a larger number of countries - possibly reflecting the exchange of foreign aid for cheap fisheries access. Japan is the focus of the remainder of this section.

Table 2: Foreign aid donated to the Pacific island countries by donor, 1998-99 average, \$US million

	Japan	United States	Australia	New Zealand	France	Other bilateral	Multilateral
Cook Islands	0.3	-	0.9	2.6	0.1	0.1	1.4
Fiji	18.0	-	10.9	3.5	0.9	2.0	3.4
French Polynesia	-	-	0.2	0.2	399.7	2.3	-
FSM ^a	8.0	90.0	0.7	0.3	-	-	5.3
Kiribati	10.9	0.6	4.7	2.0	-	0.9	1.5
Marshall Islands	9.9	46.2	0.5	0.1	-	-	7.3
Nauru	2.3	-	3.4	-	-	-	0.1
New Caledonia	0.1	-	0.3	0.3	346.3	1.7	0.1
Niue	0.1	-	0.6	2.8	-	-	0.2
Palau	28.5	15.4	0.2	0.1	-	-	0.1
PNG ^b	45.4	4.0	177.0	8.0	-	12.0	10.0
Samoa	7.0	0.7	7.0	5.0	-	3.1	4.9
Solomon Islands	9.2	0.8	10.1	5.1	-	25.3 ^c	7.1
Tokelau	-	-	0.1	3.9	-	-	0.2
Tonga	6.2	-	5.4	4	0.2	2.8	3.6
Tuvalu	0.9	-	1.3	1.2	0.3	0.1	1.7
Vanuatu	5.9	0.7	9.9	4.1	7.7	3.7	10.0
Wallis and Futuna	-	-	-	-	51.1	0.2	-
Total	152.7	158.4	233.2	43.2	806.3	28.9	56.9

^a Federated States of Micronesia

^b Papua New Guinea

^c European Commission

Source: OECD DAC database

Japan started donating aid to the Pacific islands region in the early 1970s at a time when world aid flows increased significantly (Figure 2). Skepticism about the effectiveness of foreign aid in generating economic growth led to the scaling back of world aid flows in the 1990s. However, aid flows from Japan to the Pacific island nations remained high in the 1990s, although they experienced large fluctuations. Total Japanese aid decreased in the early to mid 1990s, though it rebounded to late-1980 levels in the late 1990s (Figure 3).

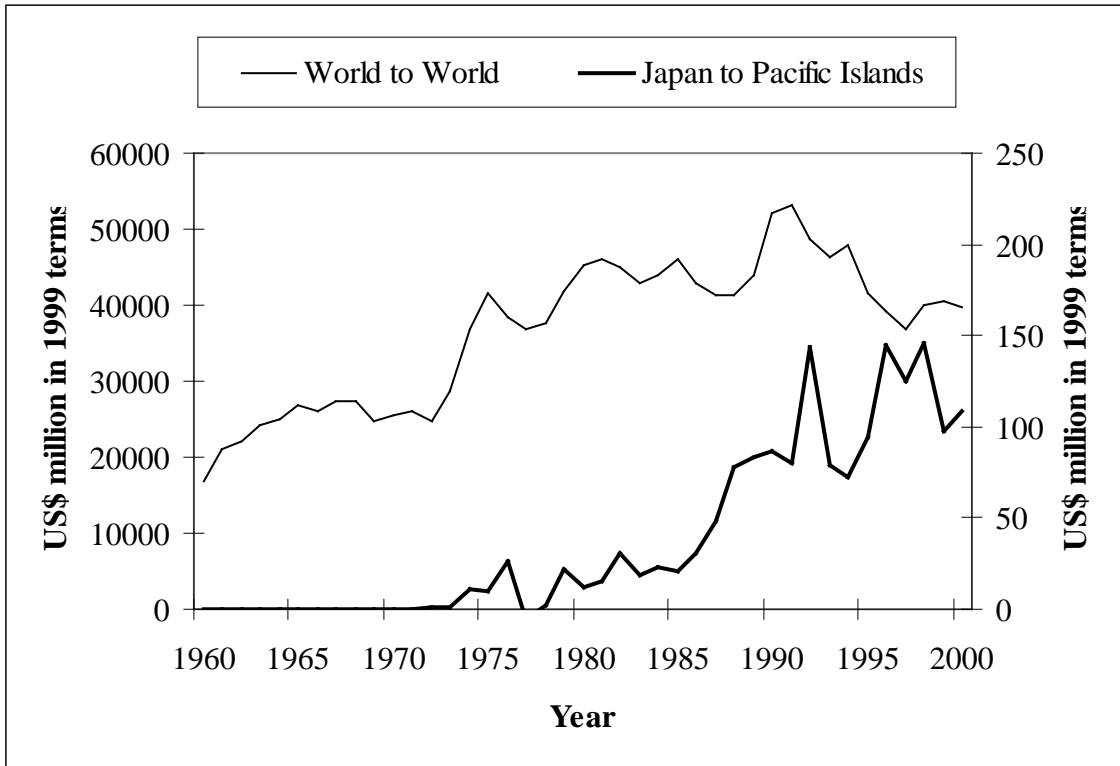


Figure 2: Aid donated by Japan to the Pacific island countries and total worldwide aid flows through time (the bold line relates to the right-hand axis and does not include Japanese foreign aid to Fiji, Samoa, Tokelau or Tonga)
Source: OECD DAC database.

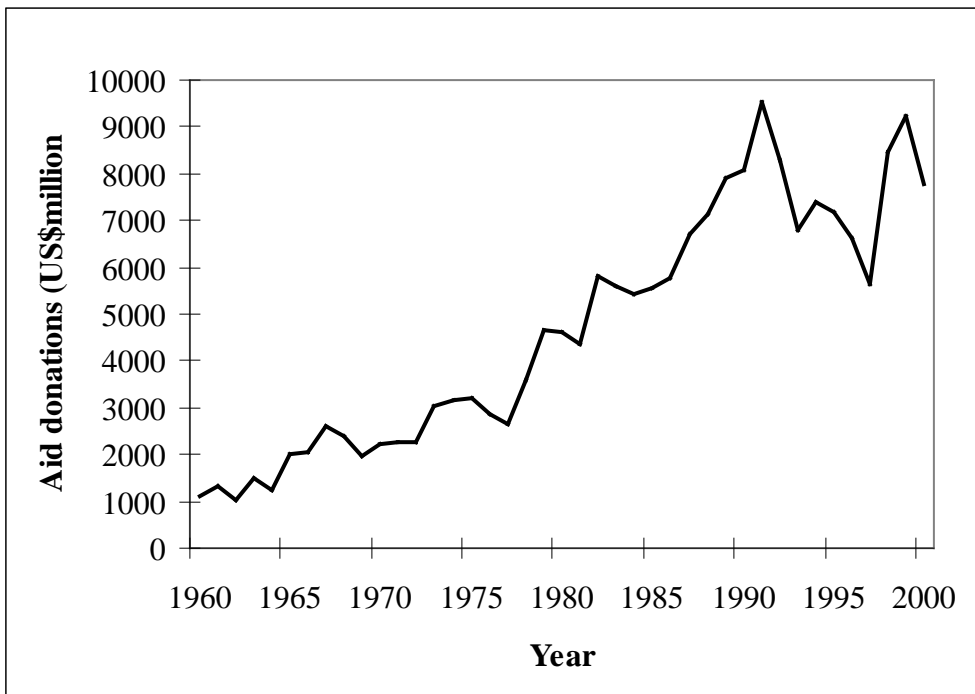


Figure 3: Total aid donated by Japan through time in 1999 terms
Source: OECD DAC database

There is little consensus in the literature regarding the size of the access fees negotiated by the Pacific island countries. Negotiations are made mostly through bilateral treaties with the distant water fishing nations, although one multilateral treaty has been negotiated between the United States and the 16 Pacific island countries. Some studies cite access fees in the order of five percent (Shurman 1998, Cartwright 1999, NCDS 1997, Hunt 1997). However, more recent publications cite lower figures. Gillett *et al.* (2001) indicate that access fees have fallen from an average of four percent in 1982 to three percent in 1999. Moreover, the World Bank (1996) indicated substantial differences between access fees paid by distant water fishing nations as presented in Table 3. In a later study, van Santen and Muller (2000) gave evidence of a decline in access fees paid by Japan but slight rises by other major distant water fishing nations.

Table 3: Access fees paid by major distant water fishing nations

Distant water fishing nation	Access fee (percent of gross revenue)	
	World Bank (1996)	Van Santen and Muller (2001)
United States	10	10
Japan	5.0	1.1
Chinese Taipei	3.7	3.8
Republic of Korea	2.2	3.4

Bertignac *et al.* (2000) estimate that the total resource rent of the Western and Central Pacific tuna fishery is 13 percent of gross sales at 1996 levels of effort. They also show that if effort level and fleet structure of the fishery were at lower levels, the resource rent could be as much as 40 percent of gross revenue. In a study of the Papua New Guinean tuna fishery, Gillett *et al.* (2000) estimate resource rents to be between 10 and 31 percent of gross revenue depending on vessel technology.

A comparison between access fees derived from the Western and Central Pacific tuna fishery and other tuna fisheries is also a useful exercise. Iheduru (1995) notes with exasperation that the European Union is paying African countries access fees between 18 and 45 percent of the value of the catch. The Australian Fisheries Management Authority charges Australian Bluefin tuna fishers a management fee that is based on cost recovery alone of approximately 11 percent of gross revenue. These studies provide strong evidence that access fees to the Western and Central tuna fishery are well below the true resource rents. At current levels of exploitation, it appears that the true resource rents are at least triple what the Pacific island countries are currently receiving.

The gross revenue from Japan's catch can be calculated by multiplying the quantity of fish harvested (Table 4) by the price of the fish (Table 5). Purse seining is Japan's major method of harvest, which targets Skipjack tuna, and to a lesser extent, Yellowfin and Bigeye. Pole and line fishing is also frequently used which targets Skipjack tuna. As a result, Skipjack harvests represent three-quarters of Japan's tuna harvest. The proportions of each species in the tuna catch are similar to those taken by all distant water fishing nations: Skipjack, 67 percent; Yellowfin, 19 percent; Bigeye, 5 percent; and Albacore, 3 percent (SPC 2000).¹ Tuna prices differ according to species and harvest technology – mainly depending on whether the tuna is sold for sashimi or canning purposes. Bigeye, which represents approximately six percent of total catch is the most valuable tuna species; its main market being the lucrative Japanese sashimi market. Skipjack, the fastest growing and hence, most prevalent species, is used for canning purposes and is the least valuable tuna species.

Table 4: Tuna catch by Japan by major species (average 1993-1998, metric tonnes)^a

	Skipjack	Yellowfin	Bigeye	Albacore	Total
Longline		19836	20226	15788	55851 (15)
Pole and line	113147	3772			116919 (31)
Purse seine	163190	40722	3456		207368 (55)
Total	276337 (73)	64330 (17)	23682 (6)	15788 (4)	380137

^a Percentages are shown in brackets

Source: SPC (2000)

Table 5: Tuna prices by major species and harvest technology (average 1993-1998, US\$/metric tonne)

	Skipjack	Yellowfin	Bigeye	Albacore
Longline		3770	6830	2100
Pole and line	1960	1960		
Purse seine	1174	1579	6830	

Source: van Santen and Muller (2000)

It is important to note that most of the catch data presented in this section are based on vessel logsheets. Access fees paid by distant water fishing nations are calculated on catch rates that are in turn based on previous catch. There is, therefore, a direct incentive for fishers to under-report catch rates so as to reduce the cost of access. Hence, the data presented here are likely to be underestimates.

The estimated gross revenue from Japan's catch is presented in Table 6. Due to uncertainty about tuna harvests and prices through time, sensitivity analysis on the expected gross revenue of the catch is included. The "standard" calculation measures the gross revenue of Japan's tuna catch in the Western and Central Pacific to be US\$807 million. This compares favourably with the estimate of van Santen and Muller (2000) of US\$789 million. For perspective, this is approximately equal to the total GDP of Kiribati, Marshall Islands, the Federated States of Micronesia, Solomon Islands and Tonga. Access fees of 1, 3 and 5 percent of the standard value are presented. At the lowest end of this scale, access fees of US\$8.1 million also compare favourably with the estimates of van Santen and Muller (2000) of US\$8.5 million in 1996/7 and US\$9.0 million in 1997/98. If Japan's access fees have decreased from 5 percent to 1 percent as reported by the World Bank (Table 3), this represents a sizeable decrease in monetary value of the access fees – approximately US\$32 million. Fluctuations in tuna yields and prices also have a marked effect on revenue generated from the fishery. Estimates presented suggest that gross revenue could be between US\$0.6 billion and US\$1 billion, and access fees could fluctuate between US\$6 and US\$10 million if Japan is paying access fees of 1 percent of gross revenue, or between US\$32 and US\$48 million if she is paying 5 percent.

Table 6: Sensitivity on the expected value of Japan's tuna catch and access fees

	Expected gross revenue from catch (US\$ millions)	Access fees (US\$ millions)		
		1% of gross revenue	3% of gross revenue	5% of gross revenue
-20%	645.3	6.5	19.4	32.3
-10%	726.0	7.3	21.8	36.3
Standard	806.7	8.1	24.2	40.3
10%	887.4	8.9	26.6	44.4
20%	968.0	9.7	29.0	48.0

Table 7 presents estimates of the value of these access fees captured by each of the Pacific island countries. Gillett *et al.* (2001) report that 60 percent of Japan's harvest is taken in the exclusive economic zone (EEZ) of the Federated States of Micronesia, 18 percent in the EEZ of the Marshall Islands, and much smaller proportions in Kiribati, Nauru, Tuvalu, Palau, Solomon Islands, Fiji and Papua New Guinea (column 2). Note that the proportion of Japan's catch in each of the Pacific island country's EEZ is similar to that of all distant water fishing nations, except 18 percent of the total catch of all distant water fishing nations is taken within Papua New Guinea's EEZ. In the late 1980s, Papua New Guinea tried to raise the value of access fees to a minimum of six percent. In reaction, Japan ceased fishing in Papua New Guinea's EEZ, fishing instead in other country's EEZs at lower cost (van Santen and Muller 2000). This reflects the problems Pacific island countries have when they negotiate bilaterally with distant water fishing nations, competing with one another in providing access. Distant water fishing nations realize this and encourage bilateral treaties. The success of the Pacific island countries in attracting higher access fees will depend on their success in working collectively in allocating access rights. The will to work collectively (for sustainability or rent-generating reasons) is increasing with the signing of the MHLCT.² The design of an institutional structure that would maximize access fees in the Western and Central Pacific tuna fishery is outside the scope of this paper. However, this issue has been addressed by Duncan and Temu (1995), Petersen (2002b), and Chand *et al.* (2002) and should be the focus of further analysis and debate.

Table 7: Tuna catch and access fees paid by Japan in Pacific island country Exclusive Economic Zones (1999)

	Proportion of total catch ^a	Proportion of expected net revenue (\$US thousand)	Access fees (\$US thousand)		
			1%	3%	5%
Fiji	0.00	188	2	6	9
FSM	0.60	486845	4868	14605	24342
Kiribati	0.10	83160	832	2495	4158
Marshall Islands	0.18	145822	1458	4375	7291
Nauru	0.07	54728	547	1642	2736
Palau	0.00	375	4	11	19
PNG	0.00	163	2	5	8
Solomon Islands	0.00	33	0	1	2
Tuvalu	0.04	35371	354	1061	1769
Total	1.00	806684	8067	24201	40334

^a Source: Gillett et al. (2001)

Assuming Japan pays each country access fees in the order of one percent, the monetary value of these fees would be approximately US\$0.5 million for the Federated States of Micronesia, US\$0.15 million for the Marshall Islands, and lesser amounts to the other Pacific island countries. Proportionately greater amounts are received if access fees are 3 or 5 percent of gross revenue.

A comparison between Japanese foreign aid to the region and fishery access fees is presented in Table 8. The exact amount of foreign aid exchanged for fishing access is uncertain as not all aid is used directly in support of the fishing industry. For this reason and because the size of the true resource rents is unknown, the size of the effective public subsidy paid out for this foreign aid in exchange for cheap access is also unknown. Hence, this comparison is made with total aid received. While not all of this aid is exchanged for cheap access, it is possible that donating countries may withhold a large proportion, if not all, foreign aid if Pacific island countries choose to pursue policies of maximizing access fees, in which case this comparison is valid. Japan has clearly stated that their foreign aid is not given without conditions; it is dependent on the existence of bilateral treaties (Shurman 1998). Access fees have been estimated up to a level of 40 percent of gross revenue, which has been described as possible (if effort levels were decreased and fleet structure were optimized) by Bertignac et al. (2000) and has been reportedly received from European fishers by African nations (Theduru 1995).

Table 8: Aid donated by Japan to Pacific island countries (1998-99 average), and sensitivity on access fees

	Aid donated	Access fees as a percentage of gross revenue (\$US million)								
	(\$US million)	1%	5%	10%	15%	20%	25%	30%	35%	40%
Cook Islands	0.3									
Fiji	18.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
French Polynesia	-									
FSM	8.0	4.9	24.3	48.7	73.0	97.4	121.7	146.1	170.4	194.7
Kiribati	10.9	0.8	4.2	8.3	12.5	16.6	20.8	24.9	29.1	33.3
Marshall Islands	9.9	1.5	7.3	14.6	21.9	29.2	36.5	43.7	51.0	58.3
Nauru	2.3	0.6	2.7	5.5	8.2	10.9	13.7	16.4	19.2	21.9
New Caledonia	0.1									
Niue	0.1									
Palau	28.5	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2
PNG	45.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Samoa	7.0									
Solomon Islands	9.2									
Tonga	6.2									
Tokelau	-									
Tuvalu	0.9	0.4	1.8	3.5	5.3	7.1	8.8	10.6	12.4	14.1
Vanuatu	5.9									
Wallis and Futuna	-									
Total	152.7	8.1	40.3	80.7	121.0	161.3	201.7	242.0	282.3	322.7
Sensitivity -20%		6.5	32.3	64.5	96.8	129.1	161.3	193.6	225.9	258.1
Sensitivity +20%		9.7	48.4	96.8	145.2	193.6	242.0	290.4	338.8	387.2

Current access fees of between 1 and 5 percent of gross fisheries revenue represent between US\$8.1 and US\$40.3 million. This revenue is comparable to between 5 and 26 percent of total Japanese aid to the region. Access fees of approximately 19 percent of gross fisheries revenue would approximately match total Japanese aid. When accounting for seasonal uncertainty in tuna harvests and prices (bottom two rows of Table 8), access fees would need to increase to between 16 and 24 percent of gross revenue. When considering each Pacific island country individually, access fees of 5 percent of gross revenue are larger than Japanese aid donations to the Federated States of Micronesia, Nauru and Tuvalu. Where access fees are 12 percent of gross revenue, all countries with significant levels of Japanese fishing activity would generate more money through access fees than through Japan's aid program. The fisheries literature reviewed earlier indicate that access fees in the order of 12 percent of gross revenue are realistic. The literature indicates that access fees up to 40 percent of gross revenue are possible, which represents more than double total Japanese aid to the region. Note that access fees presented in Table 8 are likely to be underestimated due to the incentive for underreporting catch.

For countries with minor levels of Japanese fishing activity (Fiji, Palau and Papua New Guinea), it is not likely that access fees will ever match current aid donations. These countries, and countries with no Japanese fishing activity (Cook Islands, Niue, Samoa, Solomon Islands and Vanuatu), could stand to lose considerable amounts of aid if they were to cooperate in governing the fishery. However, this must be balanced against the knowledge that access fees from other distant water fishing nations who are not aid donors (i.e., South Korea and Chinese Taipei) will increase, providing large benefits for countries with significant tuna fisheries: Papua New Guinea, the Cook Islands and the Solomon Islands. Countries that lose Japanese aid due to cooperation in fisheries management with no counteractive benefits from access fees must be compensated by benefiting countries if they are to have incentive to cooperate. While outside the scope of the paper, this is a very important issue for further research. Lastly, also note that donor countries may not withdraw all aid from the region as their motivation behind aid donations are not centred on gaining cheap fishing access alone.

Aid and fisheries development in the Pacific

The earliest economic model of the role of foreign aid in development is the Harrod-Domar model where foreign aid, as one form of foreign savings, transferred to less well-off countries augments domestic savings to increase investment and accelerate growth (Perkins et al. 2001). This model argues that the volume and the cost of capital are critical for economic development. However, no strong correlation has been found across countries between aid receipts and economic growth, suggesting that either aid is not always used effectively, or that there are limitations in the model.

A view of foreign aid's macroeconomic impact that has gained prominence since the mid 1980s is the booming sector or Dutch Disease effect. Proponents of this view assert that large aid flows cause certain sectors to boom with adverse consequences for international competitiveness of other sectors and the economic structure as a whole. The non-booming tradeable sectors find their performance hindered by the growth of the booming sector as resources are drawn away by the booming sectors bidding up their price (e.g. van Wijnbergen 1986; Weisman 1990; White 1992; and Younger 1992).

More recently, studies have argued that good governance, not capital, is most critical to development. Good governance relates to the need for strong and effective economic institutions (such as secure property rights and impartial enforcement of contracts) and good policies (such as macroeconomic balance, free trade, flexibility in labour markets, and the concentration of government on regulation to ensure competition rather than becoming involved in the production of goods and services). The World Bank recently found that foreign aid is effective in supporting investment, growth and poverty reduction in countries with good economic policies and institutions, but has little effect in countries with a poor economic and institutional environment (Burnside and Dollar 1997; Dollar and Easterly 1998; and Collier and Dollar 1998).

What appears to matter most for the effective use of aid is not its form or the terms on which it is donated, but the extent to which aid is successfully integrated by the recipient country into its development (Meier 1989). There is little evidence that foreign aid has encouraged development in the Western and Central Pacific. The region receives large amounts of aid in per capita terms compared with other developing areas (Laplagne et al. 2001). Despite this, the Pacific island economies have achieved highly variable, and often unsatisfactory, growth. For example, the Marshall Island, Federated States of Micronesia and the Solomon Islands all averaged negative GDP growth rates in the late 1990s despite large aid per capita inflows (OECD 2002). Some studies argue that aid donations to the Pacific island countries are having Dutch Disease effects, where the booming sector is the public sector which, because of the abundance of aid money, has taken over many private sector activities in addition to expanding its traditional activities (see Bertram 1999; Hooper 1993; and Laplagne 1997).

There is compelling evidence that foreign aid has had a detrimental impact on the fisheries industry through diminishing the transparency of fishing right allocations, placing Pacific island governments in weaker bargaining positions, and reducing the flexibility of government spending. Effectively, foreign aid is disempowering the Pacific island countries own efforts towards development.

Fishery managers in the Pacific island countries exchange cheap fisheries access for foreign aid and domestically-based industry. Because it is difficult to measure the cost of fishing effort, it is difficult to estimate the true resource rent of the fishery, and therefore the size of the public subsidy paid out in the form of exchanging cheap access for foreign aid and domestically-based industry. The comparison undertaken in the previous section suggests that this subsidy could be extremely large. Currently, Japan is paying access fees to the region that are approximately equal to six percent of their foreign aid donations. However, if access fees were maximized, it is likely that they could at least equal, and possibly double, the quantity of aid given by Japan. Moreover, if access fees were maximized, revenue from all distant water fishing nations, not just Japan, would increase. If the Pacific island countries pursued policies of maximizing access fees, the lack of capital would not be a constraint to development.

The distant water fishing nations encourage the lack of transparency through bilateral treaties, in which the Pacific island countries have little negotiating power, and through side payments to agree to reduce access fees. This negotiating power is further weakened by the terms and conditions on which aid is offered, and the risk of aid withdrawal. If the Pacific island countries relied on access fees, rather than foreign aid, they would not be vulnerable to the risk of aid withdrawal. However, they could face the risk of boycotts of the fishery by distant water fishing nations, or restrictions on imports of tuna products. Yet competition for access to the fishery is increasing with the European Union and other distant water fishing nations seeking entry to the fishery, as over-capacity in other regions increase. Moreover, it is likely that boycotting nations would re-enter the fishery in time.

While short-term efforts to maximize access fees may cause short-term financial losses, the potential for development of the industry is large and is likely to lead to significant and sustained economic rewards. Furthermore, decreased aid dependency will strengthen the Pacific island's bargaining position, further increasing the opportunity for increasing access fees. Strong political will is required for such a change in fisheries policy to occur. Planning for a decline in aid funds now will ease the pain of the restructuring process associated with aid withdrawal.

Another cost of exchanging cheap fisheries access for foreign aid is a diminution in flexibility of government spending. The aid substitutes for the Pacific island countries own efforts towards development and provides opportunities for diverting funds to other, possibly consumptive, purposes. Much of the aid given in exchange for cheap access, whether it has been tied to specific projects or not, has been invested in direct encouragement of the tuna industry. By doing this, the Pacific island governments have been favouring this industry in contravention of the theory of comparative advantage. Unfortunately, all public investments of this kind that have been operating for more than two years have failed, some repeatedly. If the Pacific island countries have

comparative advantage in some part of the tuna industry then, coupled with a strong institutional and policy environment, the private sector will finance them through international capital markets.

In the past, the policy and institutional environments of the Pacific island countries have been characterized by heavy protection against imports, inflexible labour markets, large public sectors and poorly developed institutional arrangements offering little support of private sector activities (Duncan et al. 1999). However, this picture is changing with greater experience and understanding of the benefits of 'market-friendly' institutions and policies. With these improvements in the investment environments of the Pacific island countries, development will occur. Development financed through fisheries revenue will be stronger than aid-funded development, and will avoid much of the political constraints associated with foreign aid. The fishing industry will only reach its growth potential with a program of liberalisation, self-help and governments, both domestic and foreign, playing appropriate roles. Fisheries development will take time and cannot be forced.

Conclusion

The Western and Central Pacific Ocean is home to the world's largest and most valuable tuna fishery. However, the Pacific island countries have found it tremendously difficult to capture significant economic benefits from the fishery. Eighty-six percent of the total tuna harvest is taken by distant water fishing nations who pay access fees in the order of approximately 3 percent of gross fisheries revenue. Research suggests that the appropriate level of fees is between 10 and 40 percent of gross revenue, comparable to access fees extracted from other tuna fisheries.

The Pacific island countries are heavily dependent on foreign aid, essentially exchanging aid for cheap access to their fisheries and poorly-directed foreign direct investment. Much of this aid has been invested in the domestic fishing industry. All of these investments have been financial failures, some repeatedly. A comparison of Japan's foreign aid and access fees indicates that current access fees (approximately US\$8 million) are comparable to about 5 percent of Japanese aid (approximately US\$150 million). However, if access fees were set at what seems to be more appropriate levels through cooperative multilateral governance, they could equal, and possibly double, Japanese aid. Greater benefits may also be realised with increased access fees from other distant water fishing nations, and the elimination of incentives for underreporting catch. It is argued that the present level of aid dependency would not be necessary if access fees were maximized; and capital would not be a constraint to development. Aid dependency is decreasing the transparency of fishing treaties, decreasing flexibility in government spending, exposing the Pacific island countries to large financial risks associated with the possibility of aid withdrawal, and stifling the region's own efforts in fisheries development and broader economic development. Given the needed improvements in the institutional and policy environments of most of the Pacific island countries, development will occur. Development financed by fisheries revenue will be stronger than aid-financed development, and will avoid many of the current political constraints associated with foreign aid flows.

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Footnotes

¹ The remaining 6 percent of catch represents other tuna species.

² The need for cooperation in managing highly migratory fish stocks, as outlined in the UN Fish Agreement, led to the September 2000 signing of the Multilateral High Level Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (MHLC 2000). All coastal and distant water fishing nations (except Japan) signed the Convention, which requires the establishment of a Commission that will be responsible for promoting cooperation and coordination between members to ensure the conservation of fish stocks. The Commission does not have an organisational structure as yet and, due to the time needed for ratification, it is not expected to come into force until at least 2003.